

FURTHER NOTES ON THE OLIVIDAE.

BY CHARLES W. JOHNSON.

II. OCCIDENTAL SPECIES.

OLIVA CAROLINENSIS (Conrad).

O. cylindrica Sowerby, Quart. Jour. Geol., vi, p. 45, 1849
 (pars) not *cylindracea* Borson 1820 = *cylindrica* Ducl.,
 not *cylindrica* Marr. 1870.

O. litterata Lam., Ann. du Mus., xvi, p. 315, 1810 (not
 Bolten 1798) *Dactylus carolinensis* Conr., Proc. Acad.
 Nat. Sci., Phila., xiv, p. 563, 1863.

O. circinata Marrat, Thes. Conch., iv, p. 21, pl. 17, f. 277,
 1871; Johnson, NAUTILUS, xxiv, p. 123, 1911.

Var. *citrina* Johns., NAUT., xxiv, p. 123, 1911.

In substituting a name for *O. litterata* Lam., pre-occupied, I used *O. circinata* Marr., overlooking the fact that it had previously been described by Conrad as a fossil from the Miocene of North Carolina, the synonymy being given by Dr. Dall in his work on the Tertiary Fauna of Florida (Trans. Wagner Free Inst. Sci., vol. 3, pt. 1, p. 44, 1890). As Sowerby's name cannot be considered, I have adopted that given by Conrad. The Miocene and Pliocene forms cannot be separated from the recent. The var. *citrina* is the bright yellow form occasionally found on the Gulf coast of Florida.

OLIVA RETICULARIS Lamarck.

O. reticularis Lam., Ann. du Mus., xvi, 314, 1810.

O. tisophana Ducl., in Chenu's Ill. Conch., ii, pl. 17, f. 17,
 18.

O. memnonia Ducl., in Chenu's Ill. Conch., ii, pl. 17, f.
 19, 20.

O. olivaceus (Meuschen) Marr., Thes. Conch., iv, pl. 4, f.
 46, 47, 51-53.

O. sowerbyi Marr., Thes. Conch., iv, pl. f. 114, 115.

O. reclusa Marr., Thes. Conch., iv, pl. 17, f. 264.

O. mercatoria Marr., Thes. Conch., iv, pl. 17, f. 269.

Var. *nivosa* Marr., Thes. Conch., iv, pl. 17, f. 276.

Var. *bifasciata* Küster; Conch. Cab., Wienkauff, Oliva, p.
 38, tab. 10, f. 8, 9.

- hepatica* Marr. (not Lamarck), Thes. Conch., iv, pl. 3, f. 27, 28.
formosa Marr., Thes. Conch., iv, pl. 3, f. 29, 30.
 Var. *olorinella* Ducl. in Chenu's Ill. Conch., ii. pl. 7, f. 15, 16.
quersolina Duel. in Chenu's Ill. Conch., ii, pl. 11, f. 7, 8.
pallida Marr. (not Swainson), Thes. Conch. pl. 25, f. 472.

Although not as variable as its Pacific analogue, *O. spicata*, from the west coast of Mexico and Central America, there are several well marked variations and some confusion owing to many of the older authors uniting some forms of the two species. Var. *nivosa* is the large cylindrical form; when banded with brown it is the *bifasciata*. The white form is *olorinella*. *O. pallida* Marr. may possibly represent the albino form of another species.

OLIVA FULGURATOR (Bolten).

- Porphyria fulgurator* Bolten, Mus. Bolt., p. 36, 1798.
O. fusiformis Lam., Ann. du Mus., xvi, p. 318, 1810.
O. ispidula Link, Besch. Rostock, Samml., part 2, 1807;
 Marrat, Thes. Conch., iv, pl. 2, f. 15-17.
bullata Marr., Thes. Conch., iv, pl. 24, f. 448.

Var. *obesina* Ducl., in Chenu's Ill. Conch., ii, pl. 17, f. 9, 10.

Both Bolten and Lamarck refer to the same figure by Martini (Conch. Cab. ii, tab. 51, f. 562). Specimens are frequently more or less clouded with brown.

OLIVA SPICATA (Bolten).

- Porphyria spicata* Bolt., Mus. Bolt., p. 35, 1798.
P. arachnoidea Bolt., Muss. Bolt., p. 36, 1798.
P. litterata Bolt., Mus. Bolt., p. 36, 1798 (not Lamarck, 1810).
O. araneosa Lam., Ann. du Mus., xvi, p. 315, 1810.
O. melchersi Menke, Zeit. für Mal., p. 24, 1851.
 Var. *hemphilli* Johns., NAUTILUS xxiv, 122, 1911.
 Var. *subangulata* Philippi, Abb., xix, tab. 1, f. 2.
 Var. *oniska* Ducl., in Chenu's Ill. Conch., ii, pl. 32, f. 9.
perfecta Johns., NAUTILUS xxiv, 122, 1911.

- Var. *pindarina* Ducl., in Chenu's Ill. Conch., ii, pl. 12, f. 10, pl. 17, f. 7, 8.
punctulata Marr. Thes. Conch., iv, pl. 2, f. 12, 13.
harpularia (Lam.) Reeve, Conch. Icon., pl. 14, f. 28 (decorticated).
- Var. *venulata* Lam. Ann. du Mus., xvi, 313, 1810.
reticularis Reeve (pars) Conch. Icon., vi, pl. 10, f. 16 b.
obesina Reeve (pars) Conch. Icon., vi, pl. 10, f. 16 c.
mariae Ducros, Rev. crit., p. 50, pl. 2, f. 26.
- Var. *graphica* Marr., Thes. Conch., iv, pl. 3, f. 36.
porcea Marr., Thes. Conch., iv, pl. 3, f. 35.
oblonga Marr., Thes. Conch., iv, pl. 2, f. 14.
- Var. *violacea* Marr., Thes. Conch., iv, pl. 4, f. 56.
- Var. *ustulata* Lam., Anim. sans vert., v, 620, 1822.
oriola Ducl. (not Lam.), in Chenu's Ill. Conch., ii, pl. 11, f. 1, 2.
fuscata Marr., Thes. Conch., iv, pl. 2, f. 20-22.
brunnea Marr., Thes. Conch., iv, pl. 4, f. 54, 55.
- Var. *polpasta* Ducl. in Chenu's Ill. Conch., Pl. 17, f. 1, 2.
- Var. *cumingi* Reeve, Conch. Icon., vi, pl. xi, f. 19.
ligneola Reeve (pars) Conch. Icon., vi, pl. 21, f. 57 a b (juv.).

Bolten and Lamarck again refer to the same figure by Martini (Conch. Cab., ii, tab. 48, f. 509). Bolten refers to it a second time as his type of *arachnoidea*, while the figure he refers to as the type of his *litterata* (Conch. Cab., ii, tab. 46, f. 488) is not sufficiently characterized for varietal distinction. The above varieties were briefly diagnosed in my previous paper (NAUTILUS, xxiv, p. 122, 1911).

ON CLASSIFICATION IN GENERAL AND THE GENUS
 LYMNAEA IN PARTICULAR.

BY HAROLD SELLERS COLTON.

The value of the generic name is the subject of this paper. To illustrate this, the genus *Lymnaea* is considered.

The most recent classification of this group is that of F. C.